Rocky Flats Cleanup Commission

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COMMENTS ON THE

Proposed Subsurface Interim Measures/
Interim Remedial Action Plan/
Environmental Assessment and Decision Document

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GENERAL COMMENTS

1) What became of the seep treatment interim measure for Women Creek?

The Cleanup Commission was surprised to learn in this Subsurface IM/IRAP/EA that a draft Woman Creek Basin Surface Water IM/IRAP/EA was submitted to the EPA and CDH, and that a preference for a No Action Alternative was made because "results of the evaluation indicated that the contaminated seeps present no immediate threat to public health or the environment" (page 1-6). This information comes as a surprise, indicating that a greater effort on the part of the DOE and the regulators could have been made to inform and involve the public in this decision-making process Where is the information that indicates that the seeps present no immediate health threat? This information should have been incorporated into this IM/IRA in order to better justify the replacement of the Women Creek Basin Surface Water Interim Measure with this Subsurface IM.

2) Site-Specific vs State-Wide Standards as ARARs

On page 3-4, in the discussion on the selection of ARARs for this interim measure, the following quote is found "As discussed in 55 FR 8741 (Preamble to the NCP), when more than one ARAR exists for a contaminant, the most stringent standard has been identified as the ARAR This IM/IRA will attain the most stringent ARAR to the greatest extent practicable " Judging by what is presented in this interim measure plan, however, the authors should have added a qualifier "The most stringent standard shall be applied as long as it is acceptable to the DOE, and if not, the DOE reserves the right to define whatever it feels is appropriate " This attitude is readily apparent in DOE's refusal to accept the Colorado Water Quality Control Commission's Segment-Specific Surface Water Standards for Rocky Flats as the applicable standards for water quality in this interim measure

As presented, DOE favors the state-wide standards over the segment-specific standards, because the latter are "not of general applicability and not enforceable through the NPDES permitting process " It is more likely that a plutonium standard of 15 pCi/l, as found in the state-wide standards, is more acceptable to the DOE than 0 05 pCi/l, as found in the site-specific standards According to the letter from the Colorado Department of Health found in the Executive Summary of this document, the Colorado Attorney General has indeed affirmed the applicability and enforceability of the site-specific standards for Rocky Flats. The DOE risks losing its nascent credibility and returning to its the Cold War attitude if it continues this policy of self-serving standards selection DOE's acceptance of whatever standards the people of Colorado have set, through their representatives on the Water Quality Control Commission, is mandatory.

3) Confusion About the Use of Interim Measures

Originally, interim measures were described as being necessary for the prevention and remediation of immediate threats to the public's health or the environment This was true for the installation of the French Drain at OU 1 and the Seep Collection and Treatment Unit for the Walnut Creek Basin. Then, the IM/IRA for OU 4 came out, but the public was cautioned not to confuse it with the IAG IM/IRA for OU 4, and that it was being implemented as an "enabling activity to facilitate pondcrete operations and site closure." Now, this Subsurface IM/IRAP/EA is released, having added a "P" after the "IRA", and also an "EA" at the end. A new justification was added about how an interim measure can be implemented in order to "gain site-specific remedial information to support final action " It appears then, that many different criteria can be called upon, depending on the situation, to define an interim measure Where is the consistency?

It also is interesting how CERCLA criteria can be used or dismissed within the conduct of an interim measure For example, page 4-8 presents information as follows "Effectiveness evaluation of the proposed subsurface IRAs does not include several of the CERCLA effectiveness criteria due to the nature of the IM/IRA These criteria include threat reduction and length of time until protection is achieved " If certain criteria can be dismissed or do not apply, then do you truly have an interim measure?

While not opposing the necessity or the benefit of the activities which are currently being proposed as interim measures at Rocky Flats, a major concern arises when considering the statement in paragraph 150 of the IAG which reads, "Interim Remedial Actions/Interim Measures shall, to the greatest extent practicable, attain ARARs " "Greatest extent practicable" leaves a lot of room for interpretation By proposing activities as "interim measures," is DOE attempting to avoid full ARAR compliance?

4) The Lack of Adequate Information in this Subsurface IM/IRA to Support a Program for Radionuclide Removal

According to the Executive Summary of this document, page EX-1, "This IM/IRAP/EA identifies and evaluates interim remedial actions for removal of residual free-phase VOC contamination from three different subsurface environments at OU 2 This document also considers interim remedial action for the removal of radionuclides from beneath the 903 Pad " What one discovers in reviewing the document, however, is that only the VOC removal technology is addressed in detail The application of the radionuclide removal technology depends on further research and thus, very little information is presented.

Because this document only describes the *in situ* vacuum-enhanced vapor extraction technology, it is the Cleanup Commission's expectation that future application of technologies, such as steam stripping, also will be explained in detail similar to that found in this document, and that the public will have an opportunity to review and comment

The Cleanup Commission is concerned, then, that DOE intends to implement additional technologies without proper review and comment. If DOE had intended this Subsurface IM/IRA document to be a "catch all" for any future technology introductions, it must reconsider Each new technology must be presented in the same manner as vapor extraction is presented in this document. DOE certainly must realize the public's concern about mobilization of radionuclides from the OU 2 area, given the past problems with the site, and must take every opportunity to address that concern.

5) The Effects of Subsurface Temperature Increases on the Mobilization of Radionuclides and Soil Bacteria

In the discussion of steam stripping on page 4-5, mention is made that temperature increases as well as changes in pH may be effective in mobilizing radionuclides In the descriptions of the vapor extraction processes, the use of a liquid propane gas-fired heater is proposed to inject hot air into the subsurface. It is thought that heat will increase the rate of volatilization of residual VOCs Since heat in the form of steam may mobilize radionuclides, what is the potential for their mobilization with heated air?

Heat also may raise the subsurface soil temperature enough to sterilize the soil and destroy the natural bacteria contained therein Has this possibility been examined, and what efforts are planned to mitigate the loss of natural soil fauna?

6) Restoration of Environmental Impacts

Several references in the document are made concerning post-remedial site controls (page 4-9), construction specifications (page 4-12), and revegetation with native grasses and shrub species (page 4-13), but little detail is available Page 5-3 states that well abandonment will be addressed in Section 4 of the Test Plan. Will other environmental restoration activities, besides well abandonment, also be described in detail in the Test Plan? If not, where will adequate descriptions of these programs be found?

7) Public Acceptance Criteria

On page 4-46, the section about the CERCLA evaluation criteria discusses assessment of the proposed remedial action with respect to public acceptance This section should be modified to include an item that addresses the public's concern with radionuclide mobilization and release from the OU 2 area. Public acceptance of any action in OU 2, especially the 903 Pad, will not be easily attained unless mobilization and dispersion of radionuclides is specifically addressed

In light of that concern, more detail should have been provided in this document as to the precautions that will be taken to avoid radioactive contamination Page 4-12 states, "During drilling and vapor extraction system installation, surveys would be performed to detect any radioactive contamination Significant radioactive contamination would be handled in accordance with PSHSP " Page 4-19 also alludes to the PSHSP (Project Specific Health and Safety Plan) stating that "the PSHSP will also specify appropriate air monitoring and response procedures in the event of an unusual VOC or radionuclide release." These procedures are important public concerns and should be made available for review in this document, not relegated to some other document that is not widely distributed or available for public comment

Another item that could be added to the list of public acceptance criteria is the positive view of *in situ* soil remediation technologies These technologies, should they prove effective, are much more favorable than an ecologically damaging and expensive program of soil removal and storage as waste

8) Need for Public Review

As was mentioned earlier, too many important details about health and safety considerations are referenced as being part of other documents which will not be available for wide-spread public review and comment Specifically, the Pilot Test Plan and the Pilot Test Report, which will contain most of the specific protection measures and other details, are mentioned as being available to the public for review, but not for comment Because these documents will be

technical in scope, they would be a good choice for review by the Technical Review Group Such review should come at the same time when the Test Plan and Report are being reviewed by the regulatory agencies, thus guaranteeing the possibility of true public input

As activities in environmental restoration begin to increase,the DOE should begin to consider a forum for the sharing of monitoring and other technical data generated during the ER process Perhaps the monthly Exchange of Information Meetings could be used as such a forum, provided that the data can be usefully summarized. Questions could then be answered and information made available about the effectiveness of the different water treatment systems at the plant As information becomes available from the Remedial Investigations, it too could become a topic for presentation at the Exchange of Information meetings

9) Incorporation of Other Technologies

A section needs to be added to this IM/IRAP/EA that discusses how the results of this pilot study will be incorporated into a final remedy for OU 2 In addition, how will the other technologies such as dehalogenation, chemical oxidation, and bioremediation be handled? Should these technologies prove effective in lab and bench-scale studies, will they too undergo implementation through an interim measure using the Observation/Streamlined Approach? Will technologies that have undergone interim study have a preferential advantage over other technologies in the final remedial action design and selection?

SPECIFIC COMMENTS

Page 4-10 and continuing to the top of page 4-11 states that "although not intended to capture radionuclides, the GAC units provide redundant filtration capacity to ensure that radionuclides are not discharged to the atmosphere " What is the ability of GAC units to capture radionuclides? Given that the majority of particles to escape the HEPA filters will be less than 0 3 microns in size, what is the efficiency of the GAC filters in capturing particles that small?

Page 4-22 In Section 4 2 3 11, Cumulative Impacts, the last sentence states, "impacts resulting from installation activities or operational accidents would be short-lived and are, thus, also not cumulative " Earlier in the paragraph the definition of cumulative impacts, as described in 40 CFR 1508 7, is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what

agency (federal or non-federal) or person undertakes such other actions Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time "

Given the above definition, it would seem that actions described in this interim measure would have some contribution to the total emissions from the plant, even if minor. As we did in our comments for the *Plan for Prevention of Contaminant Dispersion*, the Cleanup Commission stresses that some form of accounting system needs to be maintained at Rocky Flats in order to address all releases from the plant Certainly the vapor extraction and installation will not be the only activities ongoing at the plant. All emissions records must be accumulated on a regular basis so that total emissions from the plant can be accounted for.

Page 4-23: One of the three criteria for test site selection is that there be a low probability of the site containing buried drums. Specific information is not available for each site, however, that will guarantee that drums are not present. What is the contingency in case a drum is encountered during the drilling of any of the wells?

Page 4-28: In the section discussing the fact that ambient and heated air will be injected at one-half the combined extraction rate, it would be advisable to make sure that each extraction pump is set at a rate just above the one-half figure, in case one of the extraction pumps should become inoperative If air was pumped in at a greater rate than it was being extracted, contaminants could spread beyond the recovery zone

Page 4-33: The preliminary threshold for determining success of the operation at the 903 Pad will be hydrocarbon concentrations in the recovered soil vapor equal to 1 part per million On pages 4-56 and 4-65, for the operations at the Mound and East Trenches sites respectively, the threshold is listed at a hydrocarbon recovery rate of 0 5 pounds per day of VOCs Why the difference?

Page 4-34, Figure 4-6: In the legend for the diagram the letters "SA" represent an analytical sampling location, but in the diagram itself the letters "AS" are found Are they the same? In order to generate greater confidence in the system's operation, an additional analytical transmitter should be added to the end of the system to provide additional real-time monitoring of the actual vapors that will be released to the atmosphere

Page 4-38: In describing the alarms that will be attached to the real-time monitors, mention is made that the signals from the monitors "may" be used to provide automatic shutdown of the system Page 4-10 states that "HEPA filters will be followed by a radiation sensor that "will" shut down the system before the release of significant amounts of radionuclides to the GAC units can occur Has a definitive decision been made as to the use of automatic shutdown devices? The Cleanup Commission encourages the DOE to provide such a shutdown mechanism given the uncertainties of conducting these operations without detailed site-specific information

Page 4-44. In the middle paragraph, the statement is made that HEPA filtration may be removed from the system if after several weeks of operation, analysis of spent filtration media establishes that radionuclide-contaminated particles are not present in the vapor stream. Even though real-time radiation monitoring will still be conducted, the DOE should reconsider and continue to maintain HEPA filtration at all times.

Page 4-44: In the discussion in the last full paragraph, mention is made concerning the possibility of using thermal oxidation to immediately destroy VOCs extracted from the subsurface should the concentrations be high enough If such a situation arises, the Cleanup Commission urges the DOE to explore the Vapor Phase Photocatalytic Oxidation technology being developed at the National Renewable Energy Laboratory

Page 4-49: In the second paragraph under cumulative impacts, it is mentioned that two workers will be involved in the routine operation and maintenance of the vapor extraction system at the 903 Pad and that the same workers will be used at the Mound and East Trenches The document never really specifies whether the operations at the three sites will be conducted concurrently or sequentially If concurrent operations are planned, are two workers sufficient to manage all three sites? If sequential operations are planned, what is the schedule for each site?

Page 4-50: In the description of the IHSS 113, the document states that 1,405 drums containing primarily depleted uranium- and beryllium-contaminated lathe coolant were stored at the site, and that records did not indicate whether the drums leaked. Still, free-phase chlorinated hydrocarbons are found in the water and will be addressed in this remedial effort If the drums did leak and caused the hydrocarbon contamination, what happened to the uranium and beryllium?